# Comment Response Document for the Hanford Long-Term Stewardship Program:

Integrating Accelerated Site Cleanup Completion with Long-Range Post-Cleanup Planning

Prepared for the U.S. Department of Energy Assistant Secretary for Environmental Management



Project Hanford Management Contractor for the U.S. Department of Energy under Contract DE-AC06-96RL13200

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August 2003

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## **Comment Response Document for the**

## Hanford Long-Term Stewardship Program: Integrating Accelerated Site Cleanup Completion with Long-Range Post-Cleanup Planning (HNF-12254, Revision A, Working Draft)

Summary of Comments <sup>1</sup>	Commenters	Response
Subject: Cleanup Decisions		
<ol> <li>Various suggestions were provided regarding specific cleanup decisions, including the following:</li> <li>The "industrial use" cleanup level for the 300 Area is not protective of cultural resources.</li> <li>The current cleanup operations focus on reducing risk to humans when using the surface of the land. Cleanup is not adequately addressing contamination in the vadose zone that is impacting groundwater.</li> <li>Several recommendations were made regarding priorities for cleanup (e.g., concentrate completely on river protection, permanently cover/enclose the tanks and basins).</li> <li>The 300 FF-2 Record of Decision (ROD) specifically requires institutional controls to limit excavation or disturbance of soil at sites where residual contamination was left 15 feet below the surface. This provision for the 300 Area was not contained in earlier RODs for the 100 and 200 Areas, but it seems reasonable to apply this approach to those Areas as well.</li> </ol>	Columbia Riverkeeper     Member of the Public     Washington Physicians for Social     Responsibility	Cleanup decisions for the Hanford Site are made according to an approved regulatory decision-making process that is implemented by the U.S. Department of Energy (DOE) cleanup program; implementation of the cleanup process is outside the scope of the Hanford Site Long-Term Stewardship (LTS) program. However, the comments received by DOE regarding cleanup have been communicated to the cleanup program. Additional text will be added to the final document, DOE/RL-2003-39, Hanford Long-Term Stewardship Program and Transition: Preparing for Environmental Management Cleanup Completion, to clarify the definition of LTS, the scope of the LTS program, and its interface with the cleanup program. While the LTS program is separate and distinct from the cleanup program, the two programs will work together to identify and address post-cleanup obligations. This plan represents the first step in identifying the associated LTS values to influence cleanup decisions and to ensure a seamless transition from cleanup to LTS by defining the future LTS program, as well as the near-term actions to prepare for the transition. It is the intention of the LTS program to represent its values, as articulated by the vision, mission, and goals described in the final document, in the remedy selection process. Further details regarding the interface between the programs and the LTS program's roles, responsibilities, and authorities will be defined using the Richland Integrated Management System.

<sup>&</sup>lt;sup>1</sup> Key comments received from the public are summarized in the first column. Similar comments that were received from multiple commenters are presented together as a single key comment. Key comments regarding related issues are grouped together by category (e.g., cleanup decisions, institutional controls). Comments that are primarily editorial in nature, as well as comments not related to the working draft, are not included in this document.

Summary of Comments	Commenters	Response
<ul> <li>2. The LTS program needs to make sure long-term stewardship goals are being incorporated into cleanup decisions. Various suggestions were provided regarding the relationship of long-term stewardship and cleanup, including the following:</li> <li>Evaluate the cost of implementing a permanent remedy without long-term stewardship activities versus the cost of implementing a remedy with long-term stewardship activities.</li> <li>Incorporate long-term stewardship costs in the remedy decision.</li> <li>The LTS program should determine if cleanup goals are met.</li> <li>The document should include roles and responsibilities regarding current and planned disposal sites as they apply to stewardship.</li> <li>A frank discussion of the limits of technology might cause changes in remediation strategies. With a large potential "source term," such as the liquid tank wastes, for example, the adage of "an ounce of prevention" suggests that a groundwater protection strategy should emphasize such measures as preventing future leaks into the vadose zone, and solidifying wastes in an effective manner. Under other circumstances, institutional controls limiting access to contaminated groundwater might represent an appropriate strategy, until feasible treatment technologies could be developed.</li> </ul>	Hanford Communities     Hanford Advisory Board     Columbia Riverkeeper     Washington State     Department of Ecology     Washington Physicians for     Social Responsibility	The decision-making process for cleanup includes opportunities for the public and other stakeholders to review and comment on proposed remedies. The selected remedies are typically documented in Records of Decision (ROD). Institutional controls are an integral part of the remedy and any changes to institutional control requirements must be made following the prescribed regulatory process. Opportunities to comment on DOE planning documents can be found on the Hanford web site (go to http://www.hanford.gov and select "Public Involvement") as they become available.  Cleanup decisions at the Hanford Site are made according to an approved regulatory decision-making process that is implemented by the DOE cleanup program; implementation of the cleanup process is outside the scope of the LTS program. However, the comments received by DOE regarding cleanup have been communicated to the cleanup program. As currently defined by DOE, LTS for Hanford begins at the completion of the DOE, Office of Environmental Management (EM) cleanup mission. Additional text will be added to the final document to further clarify the definition of LTS, the scope of the LTS program, and its relationship with the cleanup program, including the LTS program's support for efforts to achieve the lowest life-cycle cost for remedies. The final document will include a commitment for the LTS program, in partnership with the cleanup program, to further define the transition and develop acceptance criteria for land that will be transitioned to the future LTS program. Further details regarding the interface between the programs and the LTS program's roles, responsibilities, and authorities will be defined using the Richland Integrated Management System. (See also the response to Comment #1 – Cleanup Decisions).

<b>Summary of Comments</b>	Commenters	Response
Subject: Communication Plan	Commenters	Response
3. The communication plan needs to be developed in conjunction with stakeholder input.	Columbia Riverkeeper     Hanford Advisory Board	DOE plans to develop a communications approach that provides an opportunity for the surrounding communities, local governments, and Tribal Nations to access information regarding the Site during LTS, as described in Chapters 2 and 3 of the final document. The communications approach will both inform and educate others regarding post-cleanup residual risks and Site cultural, biological, and natural resources. (The preservation, management, and accessibility of this information are other important functions of LTS and are discussed in further detail in Section 2.2.3 of the final document. See also response to Comment #7 – Information Management). DOE will make an effort to seek external input in the development of the approach. There are several places DOE can document the communication approach for LTS, one of which is in Hanford's public involvement plan.
Subject: Contingency Planning		
<ul> <li>4. The LTS program should be prepared for contingencies.</li> <li>For example, address what happens if new technology is found to improve cleanup that was previously completed.</li> <li>Groundwater remediation seems to offer one example where "rolling stewardship" can be integrated with "rolling cleanup." That is, where technologies are available, groundwater can be remediated. Where technologies are not available, technology development becomes an identified need, but monitoring of groundwater should take place in the interim, or until contaminants fall to acceptable levels through natural attenuation.</li> </ul>	<ul> <li>Hanford Communities</li> <li>Member of the Public</li> <li>Washington Physicians for Social Responsibility</li> </ul>	Additional text will be added to the final document regarding planning for off-normal events and emergencies, or contingency planning. The LTS program will establish a post-cleanup contingency process to address issues such as undiscovered conditions and catastrophic storm events, and to detect and prevent remedy failures. The process for revisiting the cleanup decisions as circumstances change, including changes in land use values, cleanup technologies, monitoring technologies, etc., will be based on and follow applicable regulatory processes. The <i>Comprehensive Environmental Response, Compensation, and Liability Act of 1980</i> <sup>1</sup> (CERCLA) and the "National Oil and Hazardous Substances Pollution Contingency Plan" <sup>2</sup> (NCP) (40 CFR 300) require the lead regulatory agency to conduct 5-year reviews of remedial actions that result in any remaining hazardous substances, pollutants, or contaminants. The purpose of the 5-year review is to determine whether the remedy is protective of human health and the environment. The 5-year review report also identifies deficiencies, if any, and makes recommendations to address them.

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Summary of Comments	Commenters	Response
Subject: End State / Future Use Decisions	Commenters	Response
<ul> <li>5. The current planned end states are not sufficient. Long-term stewardship should play a more significant role in the development of end states.</li> <li>This and other DOE documents show that DOE is more interested in getting out of active cleanup and moving to an approach where we should just watch and see if the waste moves. We need to minimize the burden we leave.</li> <li>Specific suggestions for end states were provided (e.g., security fences, declare all fenced-in locations a federal monument, add audio stations to fenced locations).</li> <li>End states must be agreed upon. Development of expected end states must be a collaborative effort, using a values-based process. A good starting point for discussions on end states is the output of the Hanford Advisory Board's Exposure Scenario Task Force.</li> <li>The LTS program should play a major role in facilitating the process for end state analysis.</li> <li>End states must be defined before long-term stewardship can begin.</li> </ul>	<ul> <li>Columbia Riverkeeper</li> <li>Member of the Public</li> <li>Hanford Advisory Board</li> <li>Nez Perce Tribe</li> <li>Washington State Department of Ecology</li> <li>Washington Physicians for Social Responsibility</li> </ul>	Additional text will be added to the final document to further clarify the relationship of the LTS program with the cleanup program. The LTS program will work with the cleanup program to provide a long-term perspective for cleanup decisions that affect end states, based on the values articulated by the LTS program's mission, vision, and goals. Decisions regarding cleanup, including the anticipated end states used in the decision-making process, are made within the scope of the approved regulatory cleanup processes. The processes involve developing remediation goals consistent with a set of threshold (or performance) criteria and balancing criteria, identified in DOE orders, guidance documents for complying with RCRA, and the CERCLA NCP. LTS values will be used to help guide the development of the remediation goals, particularly for those criteria with long-term implications. (See also responses to Comments #1 and 2 – Cleanup Decisions).
Subject: Funding		
<ul> <li>6. DOE must provide and ensure adequate funding to support long-term stewardship.</li> <li>Accelerated cleanup activities make the need for planning and funding long-term stewardship activities even more urgent</li> <li>DOE should pursue alternative funding sources. Such funding could include a trust fund (e.g., generated by fees for waste coming onto site).</li> </ul>	<ul> <li>Columbia Riverkeeper</li> <li>Nez Perce Tribe</li> <li>Hanford Communities</li> <li>Washington State Department of Ecology</li> </ul>	DOE will continue to request funds to support its long-term obligations in accordance with its statutory and regulatory requirements. In general, the manner in which the federal government funds DOE activities is subject to the appropriation direction of Congress. Funding for DOE activities at Hanford is provided on an annual basis from Congressional appropriations. Funds appropriated for a specific fiscal year typically are required to be used in that year.
		DOE recognizes that funding for LTS is a topic that is of national interest. The LTS program plans to maintain contact with DOE Headquarters regarding this issue and will monitor related congressional efforts.

Summary of Comments	Commenters	Response
Subject: Information Management		11000000
<ul> <li>7. Planning for the management of long-term stewardship information should consider the following suggestions:</li> <li>Data relevant to long-term stewardship must be identified and stored redundantly in readily accessible formats that will be maintained and accessible over time.</li> <li>There is a need for information repositories that catalog and easily identify the location of sites that require long-term stewardship.</li> <li>Information on sites with post-remediation contamination below 15 feet, and the geographical coordinates of those sites, should be maintained in a centralized database. One such database could be the Waste Information Data System, accessible through the DOE Richland Operations Office web site. The 116-C-1 Trench in the 100 B/C Area is an example of a contaminated soil site that has been remediated but with contamination left below 15 feet</li> </ul>	<ul> <li>Hanford Advisory Board</li> <li>Hanford Communities</li> <li>Washington Physicians for Social Responsibility</li> </ul>	The LTS program will be developing and implementing an information management strategy that is requirements based, as described in Section 2.2.3 of the final document. The LTS information management function will help to ensure that information generated prior to and during the cleanup mission that will be necessary to support LTS is preserved, and that such information is available to future Site stewards for access in a timely and cost-effective manner. This will include information regarding the location and nature of residual contamination.  Detailed implementation actions will be defined in the future and the suggestions provided in this comment will be considered at that time. In addition to the issues raised by this comment, another key issue is how to develop an information management strategy that includes the technical capability to understand and interpret the information in future years. The LTS program plans to maintain contact with DOE Headquarters regarding this issue and will monitor similar efforts at other DOE sites.
Subject: Institutional Controls  8. The plan must recognize the vulnerabilities of institutional controls and describe how potential failures will be addressed.  9. Institutional controls are not sufficient alone.	Hanford Advisory Board     Hanford Communities     Nez Perce Tribe     Washington State     Department of Ecology       Hanford Advisory Board	Additional text will be added to the final document discussing contingency planning, which will address potential failures of institutional controls. Potential failures of controls are considered during the CERCLA remedial investigation/feasibility study process, which includes an evaluation of the degree of certainty that remedy alternatives will provide adequate and reliable controls. Periodic performance assessments of institutional controls will be conducted to evaluate whether the controls continue to meet their objectives, as described in the <i>Sitewide Institutional Controls Plan for CERCLA Response Actions</i> (DOE/RL-2001-41, Rev. 0³). In addition, a review of the remedies may be conducted every 5 years under CERCLA. The results of the assessments will be used to improve implementation and maintenance of the controls. (See also the response to Comment #4 – Contingency Planning.)
<ul> <li>Institutional controls do not constitute stewardship.</li> <li>Institutional controls are not sufficient alone to achieve the goal of protection of human health and the environment.</li> </ul>	Washington Physicians for Social Responsibility     Columbia Riverkeeper	implementation and maintenance of institutional controls. For example, the LTS program will conduct post-cleanup monitoring activities, as well as contingency and emergency response planning. Further information regarding these and other LTS program activities will be provided in the final document.

<b>Summary of Comments</b>	Commenters	Response
10. The institutional controls are designed to protect humans		The determination of the institutional control requirements is part of the remedy selection process, which includes consideration of their potential failures (see also the responses to Comment #1 – Cleanup Decisions and #8 – Institutional Controls). Institutional controls are designed using a layering strategy of mutually reinforcing controls that work in conjunction with the remedy to protect human health and the environment from the hazards associated with residual contamination. Generally, the CERCLA remedy evaluation process begins with the expectation that treatment or engineered controls will be used to address principal-threat waste and that groundwater will be returned to its beneficial use. Unless active response measures are determined to be impracticable, the NCP cautions against the use of institutional controls as the sole remedy. However, the NCP emphasizes that institutional controls are meant to supplement engineered controls and may be a necessary component of the completed remedy.  A pilot effort associated with this issue, the B/C Reactor Pilot
but do little for ecological protection.	Columbia Riverkeeper	Ecological Risk Assessment, is under way at Hanford. Institutional controls are selected as an integral part of the remedy and are designed to work in conjunction with the remedy to protect human health and the environment, including the biological, natural, and cultural resources, from residual contamination and migration of the residual contamination. (See also the responses to Comments #1- Cleanup Decisions and #16 – Resource Management).
Subject: Land Use		·
<ul> <li>11. The LTS Plan should not rely only on the Comprehensive Land Use Plan (CLUP) regarding land use issues.</li> <li>The CLUP is a static plan, not written for the long-term period required for long-term stewardship, and is not needed in the <i>Working Draft</i>.</li> <li>Various recommendations for future uses were provided (e.g., Hanford Nuclear National Park with historical aspects, Fast Flux Test Facility).</li> </ul>	<ul> <li>Columbia Riverkeeper</li> <li>Member of the Public</li> </ul>	Additional text will be added to the final document regarding land use management. The LTS program will use the "Final Hanford Comprehensive Land Use Plan Environmental Impact Statement Record of Decision" (CLUP ROD) (64 FR 61615), which includes a 50-year time horizon, as the framework for managing the foreseeable use of the land and its associated resources. The CLUP ROD includes a process for potential land use "zoning" changes. As the amount of land owned by DOE is reduced, subsequent owners or local government jurisdictions will employ their own mechanisms for land use.
		Controls on the use of land also may be implemented to address post-cleanup requirements. The LTS program will manage post-cleanup completion of residual risks according to the requirements specified in the cleanup decision documents. For

Summary of Comments	Commenters	Response
•		land that is transferred, it is intended that the entities receiving the land or local government jurisdictions will maintain and monitor the institutional controls (or their equivalent) that DOE has put in place or that DOE will retain the right of access to the property to continue that responsibility. (See also the response to Comment #4 – Contingency Planning).
Subject: Monitoring		
12. Further clarifications regarding monitoring and its role in long-term stewardship are needed. It is essential that stewardship plans provide a framework for continuous monitoring of contaminants.	Hanford Communities	Additional text will be added to the final document regarding the monitoring activities planned for the LTS program. Monitoring activities, including monitoring the migration of contaminants in the different media (e.g., groundwater, surface water, air), are critical to a successful LTS program. The purpose of groundwater monitoring includes verifying that cleanup remedies remain effective and protective of human health and the environment and supporting cleanup decisions, such as where natural attenuation was the selected remedy.
Subject: Role of Local Governments	T	
13. DOE should develop a process for funding local government involvement in cleanup and long-term stewardship decision-making.	Hanford Communities	DOE, through the Hanford Advisory Board (HAB), provides local governments, stakeholders, interest groups and the general public with a forum for learning, discussing, and advising DOE on issues concerning the overall subject of Hanford cleanup. Board meetings are held each year and are open to the public. Meetings for various HAB committees also are held throughout the year. DOE provides funds for a meeting facilitator, reimburses HAB members for their out-of-town travel expenses, and provides logistical support (e.g., meeting room rentals, copying services, mailing). DOE also provides grants to the Washington State Department of Ecology (Ecology) and affected Tribal Nations. The Ecology grant has a portion allocated to Hanford communities. The aforementioned funds are subject to the annual appropriations process. DOE also provides payment to local governments in lieu of property tax for previously privately owned land on the Hanford Site under the <i>Atomic Energy Act of 1954</i> <sup>5</sup> . Each local government entity that receives such funds may use them at their discretion.

Summary of Comments	Commenters	Response
14. Local governments should participate in long-term stewardship "selection and implementation."	Hanford Communities	DOE agrees with this comment; it is important for the Tribal Nations, local governments, and stakeholders to participate in the planning process for LTS. (See also the response to Comment #3 – Communication Plan.) Additional text will be added to the final document regarding the participation of local governments and other entities in the LTS planning process.
		This Comment Response Document (CRD) for the working draft reflects DOE's commitment to continue to include Tribal Nations, local governments, and stakeholders in the Site decision involvement process. DOE will address these public comments in the final document, as described in this CRD. Examples of past opportunities to participate were several workshops held during the development of the Working Draft. DOE will continue to consider input from local governments in the planning activities for LTS.
15. Local government needs to be involved in the remedy decision-making process.	Hanford Communities	DOE agrees with this comment; it is important for the local governments, as well as other stakeholders, including Tribal Nations, to participate in the remedy selection process. There are substantial opportunities available for interested parties to participate, including the CERCLA remedy selection process, the <i>Hanford Federal Facility Agreement and Consent Order</i> (89-10) <sup>6</sup> (Tri-Party Agreement) public participation activities, and through <i>Federal Advisory Committee Act</i> activities. Although the cleanup decision-making process is outside the scope of the LTS program, additional text will be added to the final document regarding the interface between the LTS and cleanup programs. While the LTS program is separate and distinct from the cleanup program, the two programs will work together to identify and address post-cleanup obligations. (See also responses to Comments #1 and 2 – Cleanup Decisions.)
Subject: Resource Management	T	
<ul> <li>16. The protection of biological resources should be emphasized.</li> <li>Post-cleanup residual risks should be managed through an active ongoing comprehensive monitoring and active biological assessments program.</li> <li>The goal regarding the integration of the LTS program should be to "achieve an integrated, holistic, and multigenerational approach that sustains the biological integrity of all species."</li> </ul>	<ul> <li>Columbia Riverkeeper</li> <li>Heart of America</li> <li>Member of the Public</li> </ul>	Additional text will be added to the final document regarding the management of Site cultural, biological, and natural resources. The protection of the Site's resources is an important function of the LTS program. Hanford has several mechanisms for managing resources that provide the policies, goals, and objectives for managing the Site's biological, natural, and cultural resources. These address the ongoing surveillance, protection, and controlled use of the Site's resources. For example, the <i>Hanford Site Biological Resources Management Plan</i> <sup>7</sup> (DOE/RL-96-32, Rev. 0) provides a consistent approach to protect biological

Summary of Comments	Commenters	Dagmanga
<ul> <li>Managing risk of the ecosystem is not addressed in this document or any other DOE document.</li> <li>Goals for managing post-closure completion should include protection of biological resources, in addition to</li> </ul>	Commenters	Response  resources and monitor, assess, and mitigate impacts to them from Site development and environmental cleanup and restoration activities. The risks to the ecosystem are also addressed during the land-use permitting process.
humans.		In developing CERCLA cleanup decisions, alternatives are assessed for their ability to adequately protect human health and the environment from unacceptable risks posed by hazardous substances, pollutants, or contaminants present. Alternatives also are assessed for their potential to reduce the toxicity, mobility, or volume of the hazardous substances and their constituents, which may include an evaluation of the constituents' persistence and propensity to bioaccumulate.
		These processes are used by the LTS program to develop an integrated, holistic approach to the management of the Site's resources. (See also the response to Comment #10 – Institutional Controls).
Subject: Transfer of Property		
17. DOE must provide full disclosure upon transfer of	• Washington Physicians for	Additional text will be added to the final document regarding the
property.	Social Responsibility	sharing of information with future Site stewards. Under
• It seems appropriate to ask what information DOE		CERCLA, DOE must comply with information reporting
Richland Operations Office has provided the Port of		requirements for property transfers where hazardous substances
Benton with regard to potential beryllium use in Building		have been stored for at least 1 year, disposed of, or released
1167, including advice on pre-lease surveys to establish baselines for beryllium dust. Should Kaiser ever vacate		(CERCLA, Section 120). CERCLA also requires that the federal government retain property interests for contaminated DOE land
Building 1167, it would seem useful to establish		that is transferred to the private sector. The LTS program, in
beforehand who has responsibility for removing beryllium		partnership with the cleanup program, will further define the
dust prior to releasing or demolishing the building as		transition and develop the acceptance criteria for land that will be
appropriate. Conversations with DOE officials indicated		transitioned to the future LTS program. This will include the
that DOE had not discussed such contingencies with the		availability of information regarding the types and locations of
Port of Benton, as of early October 2002. Unless Kaiser		residual contamination once DOE land administration has been
has made an enforceable commitment to the Port to never		turned over to other responsible parties. It is incumbent on them
use beryllium in the 1100 Area, we urge DOE officials to		to manage future activities to continue the protection from the
fully inform the Port of potential contamination and its		residual contamination, if present. (See also response to
implications.		Comments #3 – Communication Plan and #7 – Information
		Management.)

Summary of Comments	Commenters	Response
18. Land should remain in the control of DOE or a federal	Hanford Advisory Board	DOE intends to explore the available and required options for
entity as long as there are residual risks.	Nez Perce Tribe	disposing of land to other entities when it is excess to DOE's
For contaminated property, the long-term stewardship		mission. For land that may be transferred to another entity, DOE
steward should remain DOE, or a federal successor, as		will retain responsibility as the potential responsible party, as
long as there is an elevated risk to the ecological resources		required under CERCLA. Also, if the land is transferred to an
and/or there are contaminated cultural resources		entity outside of the federal government, CERCLA might require
(e.g., human remains) for which removal is prohibited		DOE or another agency to retain a property interest to continue
under cultural resource laws.		oversight of any remaining institutional controls.
Long-term stewardship should not end until there is		Long-term stewardship for a particular parcel of land will no
reasonable confidence that no credible natural or man-		longer be necessary when the land, groundwater, and surface
made event or process will cause unacceptable harm, even		water have been released for unrestricted use and unrestricted
without active controls.		exposure. While some portions of the Site may require LTS in
		perpetuity, DOE's LTS activities may be considered complete
		when the LTS performance metrics, developed during the cleanup
		decision-making process, are met and/or ownership (or
		administration) of the land is transferred to another entity (see
		Chapter 4 of the final document).

<sup>&</sup>lt;sup>1</sup> Comprehensive Environmental Response, Compensation, and Liability Act of 1980, 42 USC 9601, et seq.

CERCLA = Comprehensive Environmental Response, Compensation, and Liability Act of 1980.

CFR =  $Code\ of\ Federal\ Regulations$ .

CLUP = Final Hanford Comprehensive Land Use Plan Environmental Impact Statement.

CRD = Comment Response Document.

DOE = U.S. Department of Energy.

HAB = Hanford Advisory Board.

LTS = Long-term stewardship.

NCP = "National Oil and Hazardous Substances Pollution Contingency Plan."

ROD = Record of Decision.

Tri-Party Agreement = Hanford Federal Facility Agreement and Consent Order.

<sup>&</sup>lt;sup>2</sup> 40 CFR 300, 1992, "National Oil and Hazardous Substances Pollution Contingency Plan," Code of Federal Regulations, as amended.

<sup>&</sup>lt;sup>3</sup> DOE/RL-2001-41, 2002, *Sitewide Institutional Controls Plan For Hanford CERCLA Response Actions*, U.S. Department of Energy, Richland Operations Office, Richland, Washington.

<sup>&</sup>lt;sup>4</sup> 64 FR 61615, 1999, "Hanford Comprehensive Land-Use Plan Environmental Impact Statement, Hanford Site, Richland, Washington; Record of Decision (ROD)," *Federal Register*, Vol. 64, No. 218, p. 61615, November 12, 1999.

<sup>&</sup>lt;sup>5</sup> Atomic Energy Act of 1954, 42 USC 2011, et seq.

<sup>&</sup>lt;sup>6</sup> Ecology, EPA, and DOE, 1989, *Hanford Federal Facility Agreement and Consent Order*, as amended, Washington State Department of Ecology, U.S. Environmental Protection Agency, U.S. Department of Energy, Olympia, Washington.

<sup>&</sup>lt;sup>7</sup> DOE/RL 96-32, 2001, *Hanford Site Biological Resources Management Plan*, Rev. 0., U.S. Department of Energy, Richland Operations Office, Richland, Washington.